Steps to Strengthen Compliance with the Nuclear Nonproliferation Treaty

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Thank you for holding this timely hearing on a critical issue. In my prepared statement, I summarize briefly my views on:

1. Why the NPT is important,
2. Why it is in trouble, and
3. What the United States can do about it

Why the NPT is important

The NPT embodies an almost universally shared recognition that nuclear weapons are a threat to all mankind. It recognizes that *the weapons themselves* are a threat – no matter which country possesses them. Our species and our institutions are too fallible to possess thousands of nuclear weapons indefinitely without some – and possibly virtually all – of them being used as a result of a terrible mistake.

Nuclear weapons are the original weapons of mass destruction. They can destroy masses of people indiscriminately. We learned that from Hiroshima and Nagasaki. The nuclear explosions over those cities destroyed the Army headquarters in Hiroshima and the ordinance factory in Nagasaki. They also destroyed the schools, the hospitals, the temples and everything else within a radius of more than a mile.

Today, the average nuclear weapon has ten times the explosive power of the Hiroshima and Nagasaki weapons and some are a hundred times as powerful and indiscriminate.

Other countries' nuclear weapons represent a danger to us. They could be used without authorization or by an irresponsible or incompetent leadership. And highly enriched uranium in the nuclear complexes that support those nuclear weapons could be stolen and used to by terrorists to make improvised nuclear explosives.

Our own nuclear weapons are a threat to ourselves as well as to others for the same reasons.

The Nonproliferation Treaty represents a common understanding by virtually all of the nations of the world of this danger and a commitment to do something about it: to prevent the spread of nuclear weapons to more countries and to reduce their numbers and supporting infrastructure in the countries that possess them – ultimately to zero.

Under the NPT, the International Atomic Energy Agency checks whether non-weapon states are complying with their NPT commitments and reports if that compliance is in question. The IAEA may have its limitations but it is a marvel in the anarchic international world that we live in. We know as much as we do about Iran's nuclear activities, for example, only because Iran is a Party to the NPT has given the IAEA the authority to go and look.

Why is the NPT in trouble?

There are many ways in which we could strengthen the barriers between nuclear power and nuclear-weapons technologies. For example, we could agree to eliminate stocks of HEU and plutonium wherever possible and to limit the proliferation of national enrichment and reprocessing plants.[1] But the non-weapon states are increasingly reluctant to accept additional restrictions when the nuclear-weapon states appear to have abandoned making purposeful progress on irreversible nuclear arms reductions. The non-weapons states won't pay attention to our priorities if we don't pay attention to theirs.

In June, I saw at first hand how angry this dialogue of the deaf has become when I attended a conference in Oslo on "Minimization of HEU in Civilian Nuclear Applications."[2]

Eliminating civilian uses of highly enriched uranium wherever possible is an objective on which I thought there was consensus. There is no question that, if about 100 pounds of highly enriched uranium were stolen, a terrorist group could figure out how to use it to make a Hiroshima type nuclear explosion. The Department of Energy is so convinced of this danger that it believes that a prepared group might be able to improvise a nuclear explosion on the spot within minutes of penetrating a storage facility containing HEU.[3]

So you would think that it would be easy to achieve an international agreement that highly enriched uranium should be replaced in reactor fuel by low enriched uranium wherever possible. It turns out that it is not easy! There is just about universal agreement that it is a desirable goal. But some leading non-weapon states such as South Africa,

whose government inherited a large stock of highly enriched uranium, are not ready to support the elimination of civilian uses of HEU as a new objective of the nonproliferation regime.

At the Oslo conference, South Africa's ambassador to the IAEA declared, "The NPT is not an a la carte menu from which States Parties may choose their preferences, while ignoring other aspects." He then reminded us that "South Africa has continued to call for the soonest commencement of negotiations in the Conference on Disarmament, without preconditions, on a treaty banning the production of fissile materials for nuclear weapons or other explosive devices."[4]

What he was referring to was one of the 13 steps committed to by the U.S, Russia, U.K., France and China at the NPT Review Conference of 2000. These were steps toward implementing their commitment under Article VI to "cessation of the nuclear arms race at an early date and to nuclear disarmament." The third of these steps was "the immediate commencement of negotiations on [an] effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices...with a view to their conclusion within five years."[5]

Yet, six years later, negotiations still have not begun, principally because of a disagreement between the U.S. and China over the agenda of the Conference on Disarmament. Since the CD sets its agenda by consensus, if the U.S. or China does not agree with a proposed agenda, nothing happens.

Supporters of a global HEU cleanout argued in Oslo that we should make progress where we can, and a global cleanout of civilian HEU is one place where a great deal of progress can be made today. Furthermore, we pointed out, that most of the HEU that needs to be cleaned out is in the weapons states.[6]

But our arguments did not prevail. The South Africans and others simply responded: "Your priority is a global cleanout of HEU? Ours is a Fissile Material Cutoff Treaty!"

What the United States can do

In the remainder of my testimony, I would like to discuss the FMCT and some other things that the weapon states could do to restore legitimacy to the NPT and thereby its usefulness as a tool against the dangers of nuclear proliferation and nuclear terrorism.

A Fissile Material Cutoff Treaty. An FMCT would put a ceiling on weapon stockpiles. In the case of the U.S., given the plutonium and HEU that we have declared excess, it would limit us to around 15,000 warheads. That is not much of a constraint, given that the U.S. is currently on track to reduce to a total of 2200 operational strategic and about 6000 total warheads.

The good news is, that as far as we know, the five NPT weapon states have stopped producing fissile materials for weapons. India, Israel, North Korea and Pakistan have not, however, and India, in particular, is vastly expanding its capabilities to produce plutonium for weapons. Some of this expansion will be facilitated by the U.S.-India deal. It is regrettable that the Bush Administration and Congress have not seen fit to condition India's access to the global uranium market on it joining the fissile-material production moratorium.

The Bush Administration has damaged the prospects for a meaningful FMCT further by opposing international verification.[7] This position is profoundly undermining of the NPT because an FMCT would, in effect, extend to the nuclear-weapon states one of the obligations that the non-weapon states have accepted: not to make HEU or plutonium for nuclear weapons and to accept IAEA verification of their compliance. The non-weapons states have every reason to ask why the U.S. thinks that this obligation should be verified in the non-weapon states but not in the weapon states?

An FMCT will only happen if the U.S. gives it priority – the first President Bush gave the Chemical Weapons Convention priority. Recall, by the way, his insistence that challenge inspections by the Organization for the Prevention of Chemical Weapons should be possible "any time, anywhere, without right of refusal."[8]

Unfortunately, neither the Clinton nor the Bush Administrations have given the FMCT that kind of priority.

A Comprehensive Test Ban Treaty always comes at the top of the list for the non-weapons states.[9] The U.S. Senate refused to ratify the CTBT in 1999. The global testing moratorium has continued, however, and the directors of the U.S. weapons labs have continued to certify each year that the U.S. nuclear stockpile is safe and reliable and doesn't require testing. The Department of Energy and independent experts both agree, that given the proper programs, this situation can be maintained (although they don't necessarily agree on the required programs).

Under these circumstances, it would appear to be in the U.S. interest to ratify the CTBT and lock in other countries as well. If necessary, there is always the escape clause, Article IX, "Each State Party shall, in exercising its national sovereignty, have the right to withdraw from this Treaty if it decides that extraordinary events related to the subject matter of this Treaty have jeopardized its supreme interests."

Take the objective of nuclear disarmament seriously. No one has a fail-safe formula for how to achieve a zero nuclear-weapon world. Although we are a lot closer to the preconditions for such a world today than we were during the Cold War, in at least three regions of the world: the Middle East, South Asia, and on the Korean Penninsula, countries still feel that their ultimate survival may depend upon their nuclear deterrents.

We can get to much lower levels of nuclear weaponry than Russia and the U.S. have today, however. President Kennedy's former national security advisor stated an obvious

truth in 1969 when he said that "a decision that would bring even one hydrogen bomb on one city of one's own country would be recognized in advance as a catastrophic blunder; ten bombs on ten cities would be a disaster beyond history; and a hundred bombs on a hundred cities are unthinkable."[10]

So why do we keep thousands of nuclear warheads? Because Russia has thousands of nuclear warheads and, if it came to nuclear war, we would want to be able to destroy as many as possible of those Russian warheads before they could be used against us.

Why not then destroy as many as possible *now* by agreement? All the rest of the world combined has only about 1000 warheads. Russia and the U.S. certainly could get down to that level before we started to ask other countries to reduce.

At the 2000 NPT Review Conference, the weapon and non-weapon states agreed on "The necessity of establishing in the Conference on Disarmament an appropriate subsidiary body to deal with nuclear disarmament."[11] The U.S. refuses, however, to allow a discussion of this subject at the CD.[12] What are we afraid of?

Continue the moratorium on spent-fuel reprocessing. My final suggestion is not on the list of thirteen steps agreed to in 2000 by the NPT weapon states. But it is an issue that is being driven by Congress at the moment and which I believe has major implications for the future of nuclear proliferation.

In the 1960s and early 1970s, the U.S. promoted spent fuel reprocessing and plutonium recycle worldwide. In 1974, however, India used the first plutonium that we had helped it produce and separate for what it called a "peaceful nuclear explosion."

The response of the Ford Administration, under the leadership of Secretary of State Henry Kissinger, was to block the export of reprocessing technology to more states. The Carter Administration, which came next, reviewed the rationale for the domestic reprocessing and plutonium recycle program that was being proposed in the U.S. at that time and concluded that it did not make any economic sense. A few years later, the U.S. nuclear utilities came to the same conclusion and have been unwilling to invest in reprocessing ever since.

The U.S. has therefore been able to say to other countries: "We don't reprocess and you don't need to either." In combination with the invisible hand of economics, that posture has been very effective. The number of states that are having their reactor fuel reprocessed has declined dramatically in the past thirty years.

Congress now proposes to reverse this successful policy and have federally financed reprocessing of spent power reactor fuel.[13] The reason is that the Nuclear Waste Policy Act of 1982 [Section 302(a)5(B)] committed the Department of Energy to start moving spent fuel off power-reactor sites by 1998. It expected to be able to ship the spent fuel to Yucca Mt but licensing delays have resulted in that destination being unavailable till at least 2017. A reprocessing plant would be an alternative destination.

Does this mean that we are willing to see other countries go down the same route? No, the Bush Administration has announced that it opposes new reprocessing or enrichment plants in "any state that does not already possess full-scale, functioning enrichment and reprocessing plants."[14]

The damage to the NPT and U.S. nonproliferation policy from this proposal for yet another discriminatory proposal is completely unnecessary. Storing older spent fuel in dry casks at reactor sites or at a centralized storage site would cost one tenth as much as reprocessing and is less hazardous with regard to both accidents and the potential for nuclear and radiological terrorism.[15]

Summary and recommendation

In summary, the NPT is in trouble. Some of this trouble stems from its inherent weaknesses. It was negotiated in the late 1960s, at a time when nuclear energy was expected to quickly become the dominant energy source worldwide. The U.S., for example, expected to have a nuclear capacity equivalent to about 1800 large power plants by today and to be building more than one hundred a year.[16] We actually have about 100 today and haven't ordered a new one in 30 years.

So the NPT protects the "inalienable right" of countries to acquire their own nuclear facilities, as long as they are subject to IAEA inspection and are not provably parts of a nuclear-weapon program. It is that right that we are trying to limit today in our struggle with Iran.

But we will not get support for further limiting the rights of the non-weapon states under the NPT if we don't begin to do a more credible job of living up to our own central commitment under Article VI of the NPT to irreversibly end the nuclear arms race (i.e. with the FMCT and CTBT) and get on with the task of nuclear disarmament.

In this connection, I would like to make one specific suggestion for a modest step Congress could take. It could require an annual report to Congress from the President summarizing initiatives, progress and obstacles to implementation of U.S. commitments under NPT Article VI.

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[1] See, for example, *Global Fissile Material Report 2006*, www.fissilematerials.org.

[2] See the excellent summary by Cristina Chuen and William C. Potter, "The Oslo Symposium: On The Road To HEU Minimization," http://www.cns.miis.edu/pubs/week/060822.htm, which also has links to the papers and statements presented there.

[3] U.S. Department of Energy, Office of Security Affairs, Office of Safeguards and Security, *Manual for Protection and Control of Safeguards and Security Interests, Chapter I, Protection and Control Planning* FF, (Washington, D.C.: DOE, 15 July 1994).

[4] "South African Perspectives on Highly Enriched Uranium," Statement by Mr. A. S. Minty, South Africa's representative on the IAEA Board of Governors, at the International Symposium on Highly Enriched Uranium, Oslo, Norway, 19-20 June 2006.

[5] *Final Document of the Nonproliferation Treaty Review Conference of 2000,* paragraph 15.3.

[6] See e.g. "Global cleanout: Reducing the threat of HEU-fueled nuclear terrorism" by Alexander Glaser and Frank N. von Hippel, *Arms Control Today,* January/February 2006.

[7] See, for example, the U.S. White Paper released to the Conference on Disarmament, May 18, 2006, http://geneva.usmission.gov/Press2006/0518WhitePaper.html.

[8] The result was the concept of "managed access" inspections by which international inspectors could check for the presence of prohibited chemical weapons activities while unrelated proprietary and national security information was kept shielded from their view. This should be possible for the FMCT as well.

[9] Bringing the CTBT into force and continuing the testing moratorium were the first and second of the 13 steps toward nuclear disarmament demanded of and agreed to by the nuclear weapon states in the *Final Document of the Nonproliferation Treaty Review Conference of 2000,* paragraph 15.

[10] McGeorge Bundy, "To Cap a Volcano," *Foreign Affairs,* October 1969, p. 1.

[11] *Final Document of the Nonproliferation Treaty Review Conference of 2000,* paragraph 15.4.

[12] See e.g. the statement to the CD by Acting U.S. Assistant Secretary of State Rademaker, May 18, 2006, http://geneva.usmission.gov/Press2006/0518RademakerCDstatement.html

[13] Conference Report on the Energy and Water Appropriations Act for Fiscal Year 2006, Report 109-275, "Nuclear Energy Programs," pp. 141-142 and "Nuclear Waste Disposal," pp. 156-157.

[14] The White House, "Fact Sheet: Strengthening International Efforts Against WMD Proliferation," February 11, 2004, at www.whitehouse.gov/news/releases/2004/02/20040211-5.html. This position is paraphrased in the Department of Energy's *Report to Congress: Spent nuclear fuel recycling program plan,* May 2006, p. 10.

[15] See e.g. American Physical Society Panel on Public Affairs, *Nuclear Power and Proliferation Resistance: Securing the Benefits, Limiting Risk,* 2005"

[16] U.S. Atomic Energy Commission, *Proposed Environmental Statement on the Liquid Metal Fast Breeder Reactor Program,* WASH-1535, 1974